CRADA Final Report
CRADA No. 00-468

1. Parties:
Lawrence Berkeley National Laboratory and
Dr. Jonah Jacob, Science Research Laboratory, 15 Ward St., Somerville, MA 02143

2. Title of the Project:
"Advanced Accelerator Designed to Enhance Boron Neutron Capture Therapy" (BNCT)

3. Summary of the specific research and project accomplishments:
Phase I project goals were fully achieved. The design for the 2.5 MV 50mA power supply was completed. A full-scale prototype was constructed and tested at low levels. The low level tests confirmed the design and in fact indicated that the device would be capable of providing twice the current if the input power is provided.

4. Deliverables:

Deliverable Achieved	Party (LBNL, Participant, Both)	Delivered to Other Party?
Completed Design & Prototype	Both	Design – Yes Prototype – is at LBNL

Complete design of 2.5 MV 50mA Power Supply
The design was in partnership with Science Research Laboratory (SRL), but the prototype was built and kept at LBNL.

5. Identify publications or presentations at conferences directly related to the CRADA?
To be presented at the "Application of Accelerators in Research and Industry" in Denton, Texas, upon completion of Phase II.

6. List of Subject Inventions and software developed under the CRADA:
There were no "patentable" inventions but only advancements to the state of the art in technology.

7. A final abstract suitable for public release:
The multistage, air-coupled induction transformers will definitely provide a very high voltage, 2.5 MV at very high current levels, 50mA, for Boron Neutron Capture Therapy or any other application requiring very high power levels, over 125kw of power levels.

8. Benefits to DOE, LBNL, Participant and/or the U.S. economy.
Provides a tremendous tool for fighting cancer using BNCT or could be a tool for food radiation processing.

9. Financial Contributions to the CRADA:

DOE Funding to LBNL	$
Participant Funding to LBNL	$ 30 K
Participant In-Kind Contribution Value	$ 200 K
Total of all Contributions	$ 230 K

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